

Khaled ZENNIR

Qassim University, KSA

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Personal informations

Name	Khaled ZENNIR
Date and place of birth	May 04, 1982, Oum Toub, Skikda, Algeria
Nationality	Algerian
Marital Status	Married with three Childrens (Razane, Mohamed Fadi and Racha)
Address 01	Qassim University, KSA
Address 02	Poste de Bil El Ouidane, Tamalous, Skikda, 21052, Algeria
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Studies

May 2015	HDR degree (Habilitation- Mathematics)- Option : PDEs, University Constantine 1, 25000, Algeria
December 2013	Ph.D Thesis in Mathematics- Option : PARTIAL DIFFERENTIAL EQUATIONS, University Djillali Liabes of Sidi Bel Abbes, 22000, Algeria
February 2009	Magister Thesis in mathematics- Option : DYNAMIC SYSTEMS AND FUNCTIONAL ANALYSIS, University Badji mokhtar –Annaba, 2300, Algeria
June 2006	Diploma of Graduate Studies (BAC+4 years) in mathematics- Option : NUMERICAL ANALYSIS, University 20 Août 1955, SKIKDA, 21000, Algeria
June 2000	BAC (End of high school studies), New Secondary school of Tamalous, SKIKDA, 21000, Algeria

Areas of research interest

- 1 Nonlinear Hyperbolic Partial Differential Equations: Global Existence, Blow-Up, and Long Time Behavior.
- 2 Control of PDEs

Talks in conferences and seminars

December 09-10, 2015	Days on applied mathematics and its applications, Organized at University 20 Août 1955, Skikda, Algeria. Under title: "Decay rate estimate of solution to damped wave equation with memory term in Fourier spaces"
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December 01-02, 2014	Second scientific national days , Organized at Higher Normal School of Technology Education, Skikda, Algeria. Under title: "General decay of solutions of wave equation with density and memory term in R^n "
November 26-27, 2014	Days on applied mathematics and its applications, Organized at University 20 Août 1955, Skikda, Algeria. President of the Organizing Committee.
October 27-29, 2014	Seminar on PDE and its applications, Organized at University Bordj Bouariridj, Algeria. Member of the Scientific Committee.
May 20-22, 2013	Workshop on mathematics modeling and control, Organized at University Badji Mokhtar, Annaba, Algeria. Under title: "Decay results for higher-order degenerate Kirchhoff equation"
April 17-18, 2013	National conference of mathematics and applications CNMA'13, Organised at University Abbes Laghrour of Khenchela, Algeria. Under title: "On the nonexistence of solutions to degenerately damped system of nonlinear viscoelastic wave equations"
December 12, 2011	Day of mathematics at University of sciences and technology of Oran, Algeria. Under title: " Global nonexistence of solutions to systeme of nonlinear viscoelastic wave equations with degenerate damping and source terms".
November 29-30, 2011	National Days of applied mathematics, JNMA'11 at University 20 Août 1955 SKIKDA, Algeria. Under title: " Blow up for all time of positive initial energy solutions to system of a nonlinear wave equations with degenerate damping and source terms".
march 01, 2011	Second Day between Algerian-Tunisian searchers of Partial Differential Equations " JATEDPC'2011 " Organized at University of Djillali LIABES, SIDI BEL ABBES, Algeria. Under title: " Existence and exponential growth of solutions for a nonlinear viscoelastic wave equation".
November 10-12, 2008	The 3rd Days on Differential Equations and Applications "JEDAIII" Organized at the University of ANNABA, Algeria. Under title: "Existence and decay of solutions of a nonlinear viscoelastic hyperbolic equation".
October 28-30, 2008	The International Seminar on Mathematical Analysis "SIAM" Organized at the University of JIJEL, Algeria. Under title: " Existence and asymptotic behavior of solutions for a nonlinear viscoelastic wave equation".

Publications

Papers preprint (Revised)

- 1 Existence and decay of solution to coupled system of viscoelastic wave equations with strong damping in R^n , by Khaled ZENNIR and Mohamed Karek, (J. Adv. Rese. Dyn. Cont. Syst).
- 2 Existence And Stability Of Solutions To The Cauchy Problem For A Coupled System Of A Nonlinear Weak-Viscoelastic Wave Equations In R^n , by Abbes Benaissa, Abderrahmane Beniani khaled zennir (Nonlinear studies)
- 3 Decay Rate Of Solutions To The Cauchy Problem Of A Viscoelastic Plate Equations In R^n , by Abbes Benaissa, Abderrahmane Beniani khaled zennir (Applied Mathematics E-Notes)

Papers preprint (Accepted)

- 1 Energy decay result for a nonlinear wave p -Laplac equation with a delay term, by khaled zennir (Mathematica Applicanda)

- 2 General decay of solution for coupled system of viscoelastic wave equations of Kirchhoff type with density in R^n , by Khaled ZENNIR, Abbes Benaissa and Abderrahmane Beniani (Facta Universitatis, Series Mathematics and Informatics)

Papers available online in journal indexed in ISI (Thomson reuters)

- 1 Polynomial decay of solutions to the cauchy problem for a Petrowsky-Petrowsky system in R^n , Acta Appl Math, 2016, DOI 10.1007/s10440-016-0058-1.
- 2 Wave Equation with Logarithmic Nonlinearities in Kirchhoff Type, Appl. Math. Inf. Sci., Vo 10, No 6, (2016), 1-10.
- 3 A posteriori error estimates in $H^1(\Omega)$ spaces for parabolic quasi-variational inequalities with linear source terms related to American options problem, Appl. Math. Inf. Sci., Vo 10, No 3, (2016), 1199-1212.
- 4 Global nonexistence of solutions to system of nonlinear viscoelastic wave equations with degenerate damping and source terms, Ukrainian Mathematical Journal, Vol. 65, No. 7, (2013) 723-739.
- 5 Exponential Growth of Solutions with Lp-norm of a Nonlinear Viscoelastic Hyperbolic Equation, Journal of Nonlinear Sciences and Applications 6 (2013), 252-262.

Papers available online in journal indexed in SJR (Scopus)

- 1 Energy decay result for a nonlinear wave p-Laplace equation with a delay term, Mathematica Applicanda; Vol. 44; Issue No. 2; 2016.
- 2 On the existence and decay of solution for viscoelastic wave equation with nonlinear source in weighted spaces, Rendiconti del Circolo Matematico di Palermo, 2016, DOI: 10.1007/s12215-016-0257-7.
- 3 Existence and stability of solution for transmission system with varying delay, Int. J. Appl. Math. Stat.; Vol. 55; Issue No. 2; 2016, 1-13.
- 4 General decay of solution for a coupled system of viscoelastic wave equations with density in R^n , Demonstratio Mathematica, vol 50, Issue No. 4, 2017, 1-15
- 5 General decay of solution to weak-viscoelastic wave equation with strong damping in Fourier spaces, Global Journal of Pure and Applied Mathematics, Vo 11, N 5 (2015), pp. 3027-3038.
- 6 Existence of solutions to nonlinear kappa-th-order coupled klein-gordon equations with nonlinear sources and memory termes, Applied Mathematics E-Notes, 15(2015), 121-136.
- 7 General decay of solutions for damped wave equation of Kirchhoff type with density in R^n , Ann Univ Ferrara (2015) 61:381-394.
- 8 General decay of solution of wave equation with density and memory term in R^n , J. Adv. Resear. Dynam. Control Syst, Vol. 7, Issue 2, pp. 54-65, (2015).
- 9 Growth of solutions with positive initial energy to system of degenerately damped wave equations with memory, Lobachevskii journal of mathematics, Vol. 35, No. 2, (2014) , pp. 147–156.
- 10 Blow up of positive initial-energy solutions to systems of nonlinear wave equations with degenerate damping and source terms, Nonlinear studies. (J. I) Vol.19, No.4, (2012) pp 523-535.

Papers available online in electronic journal and not indexed journal

- 1 General decay of solution for coupled system of viscoelastic wave equations of Kirchhoff type with density in R^n , Facta Universitatis, Series Mathematics and Informatics, Vol 31 (4) (2016).
- 2 Energy decay of solution to plate equation with memory in R^n , Facta Universitatis, Series Mathematics and Informatics, Vol 31 (2) (2016) 559-568.
- 3 On the absence of solutions to damped system of nonlinear wave equations of Kirchhoff-type, Vladikavkaz Mathematical Journal, Vo 17, N 4 (2015), pp. 44-58.
- 4 General Energy decay for nonlinear wave equation of ϕ -Laplacian type with a delay term in the internal feedback, Malaya J. Mat. 3(2)(2015) 136-145.
- 5 Growth of solutions with $L^{2(\rho+2)}$ -norm to system of damped wave equations with strong sources, Electronic Journal of Mathematical Analysis and Applications. Vol. 2(2) (2014), pp. 46-55.
- 6 Existence and blow-up of solution for nonlinear viscoelastic wave equation with delay term, J. Adv. Res. Appl. Math., Vol. 7, Issue. 4, 2015, pp. 45-61.
- 7 Growth of solutions to systems of nonlinear wave equations with degenerate damping and strong sources, Journal of Nonlinear Analysis and Applications 2013 (2013) 1-11.
- 8 Decay of Solutions of a Nonlinear Viscoelastic Hyperbolic Equation, An - Najah University Journal Research. (N. Sc.) Vol. 26, (2012), 19-42.

Papers submitted

- 1 Qualitative Behavior Of Solutions To The Cauchy Problem For The Viscoelastic Wave Equation With Structural Sigma-Evolution In R^n , by Abderrahmane Beniani, Abbas Benaissa And Khaled Zennir (to Waves, Wavelets and Fractals - Advanced Analysis, since 11/15/2016)
- 2 Decay of solution to damped system of two wave equations via Fourier transform, by khaled zennir and Kassah Laouar Lakhdar (to Applied and Computational Mathematics an International Journal, since 05/09/2016)
- 3 Global Existence Of Solution For Semi-linear Wave Equation Of Kirchhoff Type With Memory in R^n , by Khaled Zennir (to Annals of the University of Craiova, since 04/11/2015)
- 4 Polynomial decay of solutions to the cauchy problem for a coupled system of wave equations in R^n , by Beniani Abderrahmane , Abbas Benaissa and Khaled ZENNIR (to Journal of Rendiconti del Circolo Matematico di Palermo, since 16/04/2016)
- 5 Exponential decay rate of solutions to the Cauchy problem for Timoshenko beam system with a linear dissipative term in R , by Beniani Abderrahmane , Abbas Benaissa and Khaled ZENNIR (to Nonlinear studies, since 22/08/2016)
- 6 Well-Posedness and exponential stability for the dissipative Lamé system with time delay, by Beniani Abderrahmane, Khaled ZENNIR and Abbas Benaissa (to The Journal of Nonlinear Evolution Equations and Applications, since 18/09/2016)
- 7 Well-Posedness And Decay Of Solutions To A Bresse System With Internal Distributed Delay, by Lamine Bouzettouta, Salah Zitouni, Khaled Zennir, And Hocine Sissaouia (to Canadian Applied Mathematics Quarterly, since 16/09/2016)

- 8 Exponential Stability Of Bresse System With Internal Distributed Delay, by Lamine Bouzettouta, Salah Zitouni, Khaled Zennir, And Amar Guesmia (to International Journal of Applied Mathematics and Statistics, since 19/09/2016)
- 9 On The Decay Rate Of Solutions For A Linear Coupled Lamé System With Memories, by Khaled Zennir, Abderrahmane Beniani And Abbes Benaissaa (to Communications in Mathematics and Statistics, since 25/09/2016)
- 10 A Faedo-Galerkin Method For Multi-Dimensional Nonlinear Integro-Differential Equation With An Integral Boundary Condition, by Nouri Boumaza, Billel Gheraibia, Khaled Zennir (to Differential Equations and Dynamical Systems, since 24/09/2016)
- 11 Stability For The Lamé System With A Time Varying Delay Term In A Nonlinear Internal Feedback, by Abderrahmane Beniani, Khaled Zennir And Abbes Benaissa (to Clifford Analysis, Clifford Algebras and their applications, since 01/10/2016)

Papers in preparation

- 1 On the existence of higher-order solutions of system for a Gierer-Meinhardt model
- 2 Stabilization of Bresse system with delay (with Lamine Bouzettouta)
- 3 Energy decay result for a nonlinear wave p -Laplac equation with a delay term acting in dynamic boundary conditions
- 4 Existence and stability of a damped wave equation with two delayed terms in boundary (with zitouni salah)

Thesis

- 1 Existence and asymptotic behavior of solutions of nonlinear viscoelastic hyperbolic equation, Magister thesis, Badji Mokhtar University, annaba, Algeria, Febrioury 2009.
- 2 Study of existence, nonexistence and asymptotic behavior of solutions of some non-linear hyperbolic problems, Ph.D thesis, Djillali Liabes University, Sidi Bel Abbes, Algeria, December 2013.
- 3 Qualitative study of some evolution problems of hyperbolic type, Habilitation thesis, Frere Mentouri University, Constantine, Algeria, May 2015.

Books

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| October 2016 | Équations de la Physique Mathématiques, Cours et Exercices, Noor publishing, 2016, ISBN: 978-3-330-79850-2. |
| November 2016 | Méthodes d'Analyse Numérique, sciences de l'ingénieur, Partie I, Cours, Editions universitaires européennes, 2016, ISBN: 978-3-8416-1658-6. |
| In progress | Méthodes d'Analyse Numérique, Sciences de l'ingénieur, Partie II, TDs. |

Editorial Board:

1. American Journal of Applied Mathematics
2. Mediterranean Journal of Physics
3. Global Journal of Mathematics and Mathematical Sciences
4. International Journal of Pure and Computational Mathematics

Refereeing :

1. Mathematical Methods in the Applied Sciences

2. Waves, Wavelets and Fractals, Advanced Analysis
3. WSEAS Transactions on Mathematics

Ph-D, LMD students supervised

- PhD thesis, Defended, Jun 2016 Zitouni Salah, University Badji Mokhtar, Annaba, Algeria. Title: " Study of existence/nonexistence and behavior of solutions for some evolution problems".
- LMD thesis, In progress KAREK Mohamed, University Badji Mokhtar, Annaba, Algeria. Title: " Asymptotic profiles for some problems of wave equations in the Fourier spaces". since 2014

Ph-D, LMD theses supervision

- Second advisor of the PhD thesis Bouzettouta Lamine, University Badji Mokhtar, Annaba, Algeria. Title: " Existence and Asymptotic behavior for damped Bresse system". since 2013
- Second advisor of the PhD thesis Kassah Laouar Lakhdar, University Constantine 1, Algeria. Title: " Existence and Asymptotic profiles for a problem of wave equation with strong damping". since 2014
- Second advisor of the PhD thesis Abou ATIA Hiba, University 08 Mai 1945, Guelma, Algeria. Title: " Existence and stability for a system of nonlinear damped wave equations". since 2014
- First advisor of LMD thesis Mouhssin Bayoud, University Badji Mokhtar, Annaba, Algeria. Title: " Qualitative studies of some dissipative systems for partial differential equations of evolution-type.". since 2015

Master Students Supervised:

- June 2014 BOURRICHE HOUDA and BOULECHFAR SELMA, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title : "On the existence and decay of solutions for some dissipative wave equations"
- 2014/2015 BOUSSOKTA SOMIA and KRIKA AHLAM, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title : "On the degenerate wave equations- p -Laplacian operator"
- 2014/2015 BEDJAOUI SARA and MESKINE ILHEM, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title : " Existence and decay of solution for coupled system of viscoelastic wave equations"

Professional experience

Supervision- Licence thesis (BAC+3 years) in mathematics of:

- June 2011 BELKHEIR Imane, Department of Mathematics, University of sciences and technology Mohammed BOUDIAF of Oran, USTO, Algeria. Title: " Fixed point theorems and its applications ".
- June 2012 BAYOUD Mouhssin, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title: " The study of some evolution equations, wave equation".

- June 2012 MEKSSI Soumia, Department of Mathematics, University of sciences and technology Mohammed BOUDIAF of Oran, USTO, Algeria. Title: " The study of some evolution equations, heat equation"
- June 2013 KAOUANE AbdelAli, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title : "Sobolev spaces and distribution"
- June 2013 BOULBIBANE Besma, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title : "Hilbert spaces"
- June 2014 Bouhali Amina, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title : "Existence of solution for semilinear wave equation"
- June 2014 Khanchoul Amina, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title : "Compacity methode"
- June 2014 Taleb Amina, Department of Mathematics, University 20 Août 1955, SKIKDA, Algeria. Title : "On the heat equation"

Courses Taught at:

1. Qassim University, KSA.

- Since September 2015 Department of mathematics, Faculty of sciences and Arts, Ar Rass, - Vector calculus MATH.204. - Differential and Integral Calculus MATH.203. - Complex analysis MATH.484. - Differential equations for mathematic's students MATH.313 - Differential equations for physic's students MATH.210 - Differential equations for computer's students MATH.207

2. University 20 Août 1955, SKIKDA, Algeria

- September 2012-August 2015 - Numerical Analysis for L2 Sciences -Optimisation for M2 Sciences -Maths 01 and 02 for L1 sciences - Mathematical physics equations for L3 mathematics -Introduction in distributions for L3 mathematics

3. University of sciences and technology Mohammed BOUDIAF of Oran, Algeria

- March 2009-September 2012 - Numerical Analysis for L2 Mathematics- L2 Chimical- Probability and statistics for L2 Chimical sciences

4. Preparatory School of Science and Technology of Oran, Algeria

- Septembre 2010-Jun 2011 Preparatory School of Science and Technology of Oran, Algeria- Numerical Analysis for L2 - Algebra 01,02 and Analysis 01,02 for L1

Administration

- Since February 2013 Assistant of department chief of mathematics, faculty of sciences, university 20 Août 1955 of Skikda, Algeria
- 2014-2017 Member of Equal Committee Members of masterful teachers of the 20 Août 1955 University, Algeria.

References professors

- Pr. SISSAOUI Hocine Laboratory of numerical analysis, optimization and statistics, University Badji Mokhtar, Annaba, Algeria. (My first supervisor of magister's thesis)

Pr. BENAÏSSA ABBES Laboratory of analysis and control of partial differential equations, University Djillali liabes, Sidi Bel Abbès, Algeria. (My supervisor of PhD thesis)

Dr. SAÏD-HOUARI Belkacem Alhosn University, Abu Dhabi, UAE. (My second supervisor of magister's thesis)

Dr. GUESMIA Amar University 20 Août 1955, Skikda, Algeria. (My supervisor of graduate studies)

Short Stays

2011/2012 Invited for one month to laboratory of Analysis, Topology and Probability, UMR 6632, centre of Mathematics and informatics at university of Aix-Marseille, French. By: Pr. Jerome LOS.

2013/2014 Invited for one month to laboratory of mathematics, informatiques and applications, University Haute-Alsace, Mulhouse, French. By: Pr. Bernard Brigui.

Skills

1. Programming language: Turbo Pascal, Matlab, FreeFem, Scilab, Lapack.
2. Office automation: MS Office XP, Word, PowerPoint, Excel, SWP and La TeX.
3. Founder and member of the Association of the Young Algerian Researchers in Technologies, information and Communication (AJCATIC).

Languages knowledge

Arabe **Native,**
 French **Fluent,**
 English **Very Good**